



PTO/SB/17 (07-07)

Approved for use through 06/30/2010. OMB 0651-0032

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Effective on 12/08/2004.				Complete if Known					
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).						Patent#: 7,243,290 ssued: July 10, 2007			
FEE TRANSMITTAL									
For FY 2007				First Named Inventor Keith R. Slavin Examiner Name E. T. Abraham					
Applicant claims small entity status. See 37 CFR 1.27				Art Unit 2133					
TOTAL AMOUNT	OF PAYMENT	(\$) 100.00		orney Docket I					
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Check	METHOD OF PAYMENT (check all that apply) Check x Credit Card Money Order None Other (please identify):								
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Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17									
FEE CALCU									
1. BASIC FILIN	G, SEARCH, AND E		05450		5 77.4.4.4.1	ATION 5550			
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Application T	<u>/pe Fee (\$</u>		e (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fees	Paid (\$)	
Utility	300	150 5	500	250	200	100			
Design	200	100	00	50	130	65			
Plant	200	100 3	300	150	160	80 .			
Reissue	300	150 5	500	250	600	300			
Provisional	200	100	0	0	0	0			
2. EXCESS CLA	AIM FEES							Small Entity	
Fee Description							Fee (\$)	<u>Fee (\$)</u>	
	r 20 (including Reiss	•					50	25	
	nt claim over 3 (incl	uding Reissues)					200	100	
Multiple depend							360	180	
<u>Total Claims</u>	Extra Claims		ee Paid						
HP = highest num	ber of total claims paid for	x = ; if greater than 20.			ree	731 1	ee Paid (บ	
Indep. Claims	Extra Claims		ee Paid ((\$)				_	
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HP = highest num	ber of independent claims	paid for, if greater than 3.							
3. APPLICATIO	· · · - · · · · · · · · · · · · · · · ·								
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer									
listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
Total Sheet					tion thereof	Fee (\$)	Fee	Paid (\$)	
Total once,	Total Sheets						· uiu (V)		
4. OTHER FEE									
Non-English Specification, \$130 fee (no small entity discount)									
Other (e.g., late filing surcharge): 1811 Certificate of correction 100.00									
SUBMITTED BY									
Signature	Je.			stration No.	28,371	Telephone	(202) 42	0-2232	
Name (Print/Type)	Thomas I D'Ami	20	TAMO	ym gority	•	Date	August 1		

10/616958



CofCA

Docket No.: M4065.0710/P710

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:

Keith R. Slavin

Patent No.: 7,243,290

Issued: July 10, 2007

For: DATA ENCODING FOR FAST CAM AND

TCAM ACCESS TIMES

Certificate

AUG 2 0 2007

of Correction

REQUEST FOR CERTIFICATE OF CORRECTION PURSUANT TO 37 C.F.R. §§ 1.322 & 1.323

Attention: Certificate of Correction Branch Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected.

In the Specification, the PTO erroneously failed to indent the shift rows in the tables as indicated in the application. Consequently, the errors in the following tables are to be corrected:

Column 5, lines 45-49:

"1 0 1 1 1 0 1 1 8-bit comparand

1 0 1 1 1 0 1 1 obtained by shifting the above word right 1 bit

1 1 1 0 0 1 1 0 1 9-bit column-wise "XOR-WOR" result when 2 bits are in column"

08/17/2007 CNGUYEN2 06000023 7243290

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AUG 2 0 2007 DSMDB-2303489v01

Should read --

10111011 8-bit comparand

1 0 1 1 1 0 1 1 obtained by shifting the above word right 1 bit

111001101 9-bit column-wise "XOR-WOR" result when 2 bits are in column--;

Column 6, lines 15-20:

"1011101111

1011101111 shift upper word right 1 bit to get lower word

1 1 1 0 0 1 1 0 0 0 1 11-bit column-wise "XOR-WOR" result when 2 bits in column"

Should read --

1011101111

1011101111 shift upper word right 1 bit to get lower word

1 1 1 0 0 1 1 0 0 0 1 11-bit column-wise "XOR-WOR" result when 2 bits in column--;

Column 8, lines 62-66:

"10111011

(1) 8-bit incoming CAM word

10111011

(2) obtained by shifting above word right 1 bit

1 1 1 0 0 1 1 0 1 0 0 0 0 (3) 13-bit encoded CAM word: column-wise XOR-WOR of (1) and (2), 0-padded"

Should read --

10111011

(1) 8-bit incoming CAM word

10111011

(2) obtained by shifting above word right 1 bit

1110011010000

(3) 13-bit encoded CAM word: column-wise XOR-WOR

of (1) and (2), 0-padded--;

Column 9, lines 14-21:

- "1 0 1 1 1 0 1 1 1 1 0 0 (4) 12 bit comparand, top 8 prefix matches (1)
 - 1 1 1 1 1 1 1 1 0 0 0 0 (5) "AND" mask for 8-bit prefix (top 8 bits enabled)
- 1 0 1 1 1 0 1 1 0 0 0 0 (6) column-wise "AND" of (4) and (5)
- 1 0 1 1 1 0 1 1 0 0 0 0 (7) is (6) shifted right by 1 bit
- 1.1 1 0 0 1 1 0 1 0 0 0 0 (8) column-wise "XOR-WOR" of (6) and (7)
- 1 1 1 0 0 1 1 0 1 0 0 0 0 (3) 13-bit match word in CAM storage location"

Should read --

- 1 0 1 1 1 0 1 1 1 1 0 0 (4) 12 bit comparand, top 8 prefix matches (1)
- 1 1 1 1 1 1 1 1 0 0 0 0 (5) "AND" mask for 8-bit prefix (top 8 bits enabled)
- 1 0 1 1 1 0 1 1 0 0 0 0 (6) column-wise "AND" of (4) and (5)
 - 1 0 1 1 1 0 1 1 0 0 0 0 (7) is (6) shifted right by 1 bit
- 1 1 1 0 0 1 1 0 1 0 0 0 0 (8) column-wise "XOR-WOR" of (6) and (7)
- 1 1 1 0 0 1 1 0 1 0 0 0 0 (3) 13-bit match word in CAM storage location--;

Column 9, lines 37-45:

- "1 0 1 1 0 0 1 1 1 1 1 0 0 (9) 12 bit comparand
 - 1 1 1 1 1 1 1 1 0 0 0 0 (10) "AND" mask for 8-bit prefix (top 8 bits enabled)
- 1 0 1 1 0 0 1 1 0 0 0 0 (11) column-wise "AND" of (9) and (10)
- 1 0 1 1 0 0 1 1 0 0 0 0 (12) is (11) shifted right by 1 bit
- 1 1 1 0 1 0 1 0 1 0 0 0 0 (13) column-wise "XOR-WOR" of (11) and (12)
- 1 1 1 0 0 1 1 0 1 0 0 0 0 (3) 13-bit encoded CAM word stored in a CAM storage

location

0 0 0 0 1 1 0 0 0 0 0 0 (14) mismatched bits between (13) and (3)"

Should read --

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1 0 1 1 0 0 1 1 1 1 0 0 (9) 12 bit comparand

1 1 1 1 1 1 1 1 0 0 0 0 (10) "AND" mask for 8-bit prefix (top 8 bits enabled)

1 0 1 1 0 0 1 1 0 0 0 0 (11) column-wise "AND" of (9) and (10)

1 0 1 1 0 0 1 1 0 0 0 0 (12) is (11) shifted right by 1 bit

1 1 1 0 1 0 1 0 1 0 0 0 0 (13) column-wise "XOR-WOR" of (11) and (12)

1 1 1 0 0 1 1 0 1 0 0 0 0 (3) 13-bit encoded CAM word stored in a CAM storage

location

0 0 0 0 1 1 0 0 0 0 0 0 (14) mismatched bits between (13) and (3)--;

Column 9, lines 59-64:

"1 0 1 1 1 0 1 1 (1) 8-bit incoming TCAM word

1 0 1 1 1 0 1 1 (2) obtained by shifting above word right 1 bit

1 1 1 0 0 1 1 0 1 X X X X (3) 13-bit encoded TCAM word: column-wise "XOR-WOR" of (1) and (2), X padded"

Should read --

1 0 1 1 1 0 1 1 (1) 8-bit incoming TCAM word

1 0 1 1 1 0 1 1 (2) obtained by shifting above word right 1 bit

1 1 1 0 0 1 1 0 1 X X X X (3) 13-bit encoded TCAM word: column-wise "XOR-WOR" of (1) and (2), X padded--;

Column 10, lines 8-15:

"1 0 1 1 1 0 1 1 1 1 0 0 (4) 12 bit comparand, top 8 prefix matches (1)

1 1 1 1 1 1 1 1 0 1 1 1 (5) single bit "AND" mask for 8 bit prefix

1 0 1 1 1 0 1 1 0 1 0 0 (6) column-wise "AND" of (4) and (5)

1 0 1 1 1 0 1 1 0 1 0 0 (7) is (6) shifted right by 1 bit

```
1110011011100 (8) column-wise "XOR-WOR" of (6) and
(7)
       1 1 1 0 0 1 1 0 1 X X X X (3) 13-bit encoded TCAM word (padded)"
      Should read --
      101110111100
                             (4) 12 bit comparand, top 8 prefix matches (1)
      111111110111
                             (5) single bit "AND" mask for 8 bit prefix
      101110110100
                             (6) column-wise "AND" of (4) and (5)
       101110110100
                             (7) is (6) shifted right by 1 bit
      1110011011100
                             (8) column-wise "XOR-WOR" of (6) and
(7)
      111001101XXXX
                             (3) 13-bit encoded TCAM word (padded)--; and
      Column 10, lines 27-35:
      "101100111100
                             (9) 12 bit comparand 1 bit different to (4)
       111111110111
                             (10) single bit "AND" mask for 8-bit prefix
       101100110100
                             (11) column-wise "AND" of (9) and (10)
       101100110100
                             (12) is (11) shifted right by 1 bit
       1 1 1 0 1 0 1 0 1 1 1 1 0 0 (13) column-wise "XOR-WOR" of (11) and (12)
       1 1 1 0 0 1 1 0 1 X X X X (3) 13-bit encoded TCAM word (padded)
       0 0 0 0 1 1 0 0 0 0 0 0 (14) mismatched bits between (13) and (3)"
      Should read --
      101100111100
                             (9) 12 bit comparand 1 bit different to (4)
      111111110111
                             (10) single bit "AND" mask for 8-bit prefix
      101100110100
                             (11) column-wise "AND" of (9) and (10)
                                                               MUG 2 0 2007.
       101100110100
                             (12) is (11) shifted right by 1 bit
```

1 1 1 0 1 0 1 0 1 1 1 1 0 0 (13) column-wise "XOR-WOR" of (11) and (12)

1 1 1 0 0 1 1 0 1 X X X X (3) 13-bit encoded TCAM word (padded)

0 0 0 0 1 1 0 0 0 0 0 0 0 (14) mismatched bits between (13) and (3)--.

Also in the Specification, Applicant made the following errors to be corrected:

Column 1, line 62, "it" should read --its--;

Column 5, line 36, "used then" should read --used, then--;

Column 12, lines 47-48, "an miscellaneous" should read --a miscellaneous--;

Column 12, line 49, "an legacy" should read --a legacy--;

Column 12, line 50, "also coupled" should read --also be coupled--;

Column 12, line 60, "an local" should read --a local--;

Column 12, line 64, "an universal" should read --a universal--;

Column 12, line 65, "via to the" should read --via the--; and

Column 13, line 1, "to one additional" should read --to additional--.

In the Claims, Applicant made the following errors to be corrected:

Claim 15, column 14, line 54, "hierarchical of" should read --hierarchical--; and

Claim 30, column 16, line 24, "encode" should read --encoded--.

Some of the errors were found in the application as filed by Applicant. Please charge our Credit Card in the amount of \$100.00 covering the fee set forth in 37 C.F.R. § 1.20(a). Credit Card Payment Form SB-2038, with a signature from an authorized cardholder, is enclosed.



The errors now sought to be corrected are inadvertent typographical errors the correction of which does not involve new matter or require reexamination.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment.

Patentee respectfully solicits the granting of the requested Certificate of Correction.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0710/P710.

Dated: August 16, 2007

Respectfully submitted,

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Michael A. Weinstein

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Attorneys for Applicant

DSMDB-2303489v01

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 4

PATENT NO.

7,243,290

APPLICATION NO. :

10/616,958

ISSUE DATE

July 10, 2007

INVENTOR

Keith R. Slavin

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification, the following errors are corrected:

Column 1, line 62, "it" should read --its--;

Column 5, line 36, "used then" should read --used, then--;

Column 5, lines 45-49:

"10111011 8-bit comparand

1 0 1 1 1 0 1 1 obtained by shifting the above word right 1 bit

1 1 1 0 0 1 1 0 1 9-bit column-wise "XOR-WOR" result when 2 bits are in column"

Should read --

10111011 8-bit comparand

1 0 1 1 1 0 1 1 obtained by shifting the above word right 1 bit

1 1 1 0 0 1 1 0 1 9-bit column-wise "XOR-WOR" result when 2 bits are in column--;

Column 6, lines 15-20:

"1011101111

1011101111

shift upper word right 1 bit to get lower word

11100110001

11-bit column-wise "XOR-WOR" result when 2 bits in column"

Should read --

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(Also Form PTO-1050)

	(Also Form P10-1050)
1011101111	,
1011101111 s	shift upper word right 1 bit to get lower word
11100110001 1	11-bit column-wise "XOR-WOR" result when 2 bits in column;
Column 8, lines 62-66:	
"10111011	(1) 8-bit incoming CAM word
10111011	(2) obtained by shifting above word right 1 bit
1110011010000	(3) 13-bit encoded CAM word: column-wise XOR-WOR of (1) and (2), 0-padded"
Should read	
10111011	(1) 8-bit incoming CAM word
10111011	(2) obtained by shifting above word right 1 bit
1110011010000	(3) 13-bit encoded CAM word: column-wise XOR-WOR of (1) and (2), 0-padded;
Column 9, lines 14-21:	
"101110111100	(4) 12 bit comparand, top 8 prefix matches (1)
11111110000	(5) "AND" mask for 8-bit prefix (top 8 bits enabled)
101110110000	(6) column-wise "AND" of (4) and (5)
101110110000	(7) is (6) shifted right by 1 bit
1110011010000	(8) column-wise "XOR-WOR" of (6) and (7)
1110011010000	(3) 13-bit match word in CAM storage location"
Should read	
101110111100	(4) 12 bit comparand, top 8 prefix matches (1)
11111110000	(5) "AND" mask for 8-bit prefix (top 8 bits enabled)
101110110000	(6) column-wise "AND" of (4) and (5)
101110110000	(7) is (6) shifted right by 1 bit
1110011010000	(8) column-wise "XOR-WOR" of (6) and (7)
1110011010000	(3) 13-bit match word in CAM storage location;
Column 9, lines 37-45:	
"101100111100	(9) 12 bit comparand
11111110000	(10) "AND" mask for 8-bit prefix (top 8 bits enabled)
101100110000	(11) column-wise "AND" of (9) and (10)
101100110000	(12) is (11) shifted right by 1 bit
1110101010000	(13) column-wise "XOR-WOR" of (11) and (12)

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(Also Form PTO-1050)

	(Also Form PTO-1050)
111001101000	(3) 13-bit encoded CAM word stored in a CAM storage location
0000110000000	(14) mismatched bits between (13) and (3)"
Should read	
101100111100	(9) 12 bit comparand
11111110000	(10) "AND" mask for 8-bit prefix (top 8 bits enabled)
101100110000	(11) column-wise "AND" of (9) and (10)
101100110000	(12) is (11) shifted right by 1 bit
1110101010000	(13) column-wise "XOR-WOR" of (11) and (12)
111001101000	(3) 13-bit encoded CAM word stored in a CAM storage location
0000110000000	(14) mismatched bits between (13) and (3);
Column 9, lines 59-64:	
"10111011	(1) 8-bit incoming TCAM word
10111011	(2) obtained by shifting above word right 1 bit
111001101XXXX	(3) 13-bit encoded TCAM word: column-wise "XOR-WOR" of (1) and (2), X padded"
Should read	
10111011	(1) 8-bit incoming TCAM word
10111011	(2) obtained by shifting above word right 1 bit
111001101XXXX	(3) 13-bit encoded TCAM word: column-wise "XOR-WOR" of (1) and (2), X padded;
Column 10, lines 8-15:	
"101110111100	(4) 12 bit comparand, top 8 prefix matches (1)
11111110111	(5) single bit "AND" mask for 8 bit prefix
101110110100	(6) column-wise "AND" of (4) and (5)
101110110100	(7) is (6) shifted right by 1 bit
1110011011100	(8) column-wise "XOR-WOR" of (6) and (7)
111001101XXXX	(3) 13-bit encoded TCAM word (padded)"
Should read	
101110111100	(4) 12 bit comparand, top 8 prefix matches (1)
11111110111	(5) single bit "AND" mask for 8 bit prefix
101110110100	(6) column-wise "AND" of (4) and (5)
101110110100	(7) is (6) shifted right by 1 bit
1110011011100	(8) column-wise "XOR-WOR" of (6) and (7)

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		(71100 7 011171 7 0 1000)
111001101XXXX	(3) 13-bit encoded TCAM word (padded); and	
Column 10, lines 27-35:		
"101100111100	(9) 12 bit comparand 1 bit different to (4)	
111111110111	(10) single bit "AND" mask for 8-bit prefix	
101100110100	(11) column-wise "AND" of (9) and (10)	
101100110100	(12) is (11) shifted right by 1 bit	
1110101011100	(13) column-wise "XOR-WOR" of (11) and (12)	
111001101XXXX	(3) 13-bit encoded TCAM word (padded)	
0000110000000	(14) mismatched bits between (13) and (3)"	
Should read		
101100111100	(9) 12 bit comparand 1 bit different to (4)	
11111110111	(10) single bit "AND" mask for 8-bit prefix	•
101100110100	(11) column-wise "AND" of (9) and (10)	
101100110100	(12) is (11) shifted right by 1 bit	
1110101011100	(13) column-wise "XOR-WOR" of (11) and (12)	
111001101XXXX	(3) 13-bit encoded TCAM word (padded)	
0000110000000	(14) mismatched bits between (13) and (3)	
1		

Column 12, lines 47-48, "an miscellaneous" should read --a miscellaneous--;

Column 12, line 49, "an legacy" should read --a legacy--;

Column 12, line 50, "also coupled" should read -- also be coupled--;

Column 12, line 60, "an local" should read -- a local--;

Column 12, line 64, "an universal" should read --a universal--;

Column 12, line 65, "via to the" should read --via the--; and

Column 13, line 1, "to one additional" should read --to additional--.

In the Claims, the following errors are corrected:

Claim 15, column 14, line 54, "hierarchical of" should read --hierarchical--; and

Claim 30, column 16, line 24, "encode" should read --encoded--.